Single cell RNA sequencing data analysis, 4-6 February 2019

Åsa Björklund

asa.bjorklund@scilifelab.se

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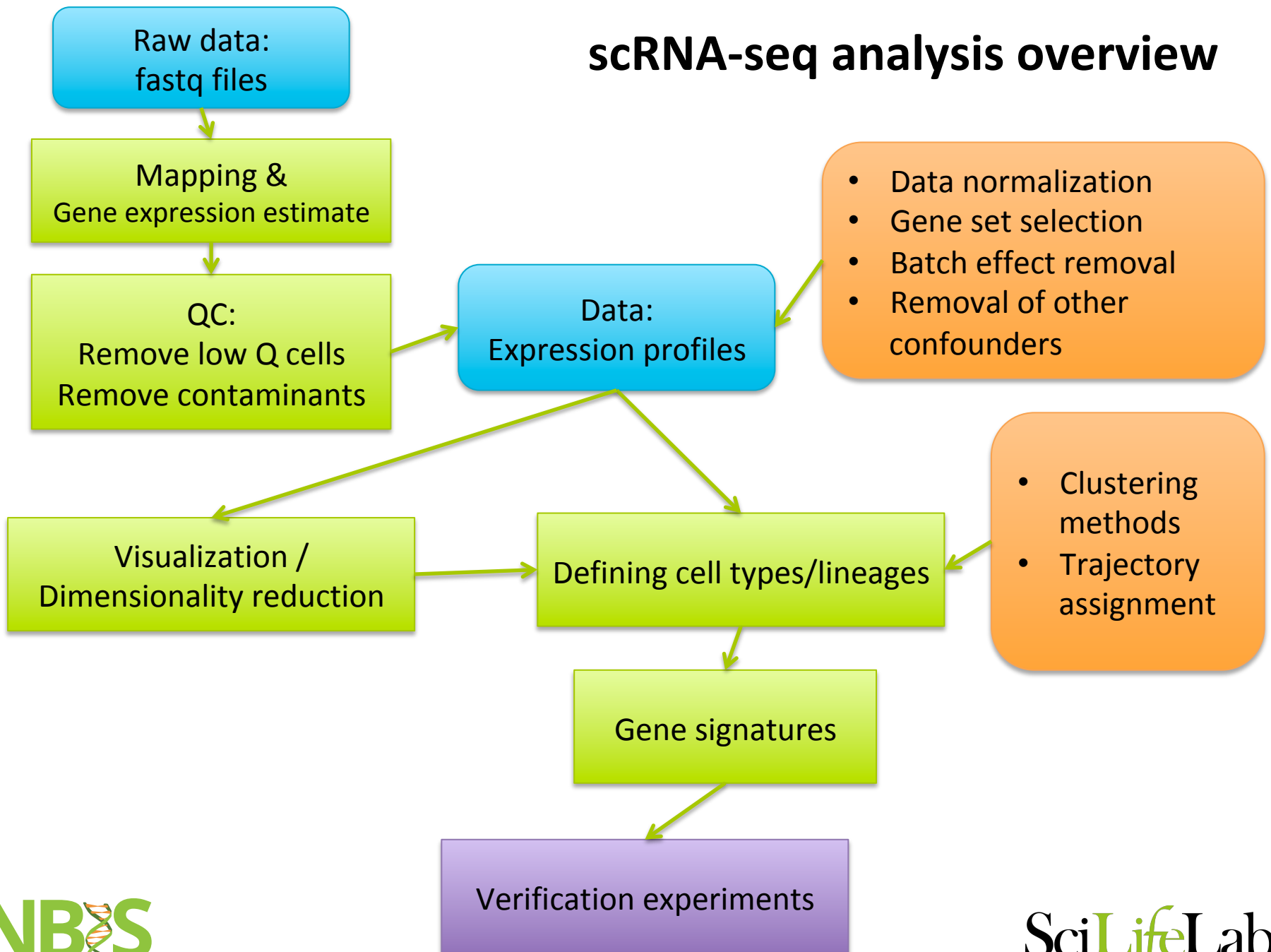
Monday

09.00-09.15 Course introduction (Åsa Björklund)

09.15-10.00 **scRNAseq methodologies and ESCG platform** (Henrik Gezelius)

10.30-11.20 **Introduction to read alignment pipelines and gene expression estimates** (Johan Reimegård – Has a fever!)

11.20-12.10 **scRNAseq quality control** (Åsa Björklund)

12.10-13.15 Lunch

13.15-14.00 **Dimensionality reduction** (Paulo Czarnewski Barenco)

14.00-14.15 Wrap up of todays lectures (Åsa Björklund)

14.15-14.30 Intro to exercises (Åsa Björklund)

14.30-17.00 Practical Exercises(Johan, Anna, Åsa, Paulo)

18.00- Course dinner

Tuesday

09.00-09.50 **Data normalization** (Nikolay Oskolkov)

10.20-11.10 **Differential gene expression** (Olga Dethlefsen)

11.10-12.00 **Clustering techniques and scRNAseq toolkits** (Åsa Björklund)

12.00-12.15 Wrap up of todays lectures (Åsa Björklund)

12.15-13.15 Lunch

13.15-17.00 Practical exercises (Nikolay, Olga, Åsa)

Wednesday

09.00-09.45 **Pseudotime and trajectory analysis** (Åsa Björklund)

10.15-11.00 **Subgroups of midbrain dopamine neurons** (Åsa Björklund)

11.00-12.00 **Spatial transcriptomics and spatial mapping of single cells** (Stefania Giaccomello)

12.00-12.15 Wrap up of todays lectures (Åsa Björklund)

12.15-13.15 Lunch

13.15-16.00 Practical exercises (Åsa, Estelle, Jakub)

16.00-17.00 Summary of the week (Åsa Björklund)

Course Dinner

- Shanti – Touch of Bengal

  https://shanti.se/touch-of-bengal

- Have a look at the menu beforehand and decide what you want to eat.

- Google docs where you should preorder your dish that we will send to the restaurant.

- The budget allows one drink, if you want anything more, you will have to pay for it yourself.

Practical exercises

- We have several different exercises and we do not expect all of you to have time to go through all of them during the few hours that we have.

- Focus on the ones you feel is most relevant for you and start there.

PLEASE ASK QUESTIONS!